

HITRONIC® HQA Outdoor Aerial Cable

DB_HQA800_EN (version 1.2)
valid from: 14.10.2013

1. Product Description

Cable designation: A-DQ(ZN)B2Y ADSS

Outdoor aerial glass fibre optic cable with multiple stranded loose tubes, non-metallic strength elements, UV-resistance, robust and halogen-free cable sheath

2. Application

For use in outdoor, self-support aerial applications, and industrial environment

Methods of deployment: suspension from poles

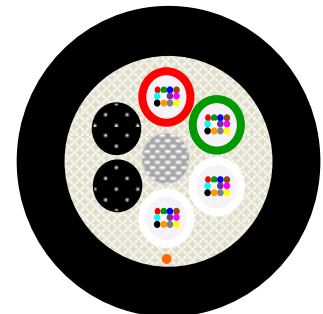
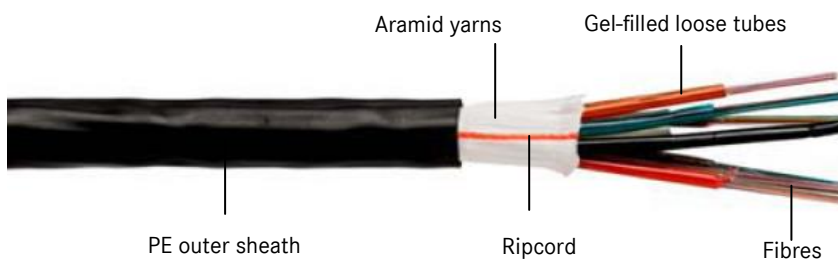
Aerial Installation conditions:

| Wind (km/h) | Ice (mm) | Span (m) |
|-------------|----------|----------|
| 100 | 0 | 90 |
| 0 | 10 | 80 |
| 0 | 15 | 45 |
| 60 | 10 | 60 |

NESC Aerial Installation Conditions:

| | Span (m) |
|-------------|----------|
| NESC Light | 80 |
| NESC Medium | 55 |

3. Product Design



| | |
|--------------------------|--|
| Cable core | 8 stranded loose tubes with up to 96 glass fibres, a central element, aramid yarns |
| Cable inner sheath | - |
| Cable outer sheath | Polyethylene (PE) outer sheath, halogen-free, UV and water-resistant |
| Colour of inner sheath | - |
| Colour of outer sheath | Black (RAL 9005) |
| Colour of loose tube | Red, green, subsequent tubes are natural, fillers are black |
| Identification of fibres | Red, green, blue, yellow, grey, violet, brown, orange, white, pink, black, turquoise |
| Type of armoring | - |



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4. Optical and Physical Properties of Cabled Fibre (and Bare Fibre)

| Multimode fibre | | 50/125 µm | 50/125 µm | 50/125 µm | 62.5/125 µm | |
|----------------------------|-----------|-----------------|--------------|-------------|-------------|---------------|
| | | OM4 | OM3 | OM2 | OM1 | |
| Attenuation | @ 850 nm | dB/km | ≤ 3.5 (2.5) | ≤ 3.5 (2.5) | ≤ 3.5 (2.5) | ≤ 3.5 (3.0) |
| | @ 1300 nm | dB/km | ≤ 1.5 (0.7) | ≤ 1.5 (0.7) | ≤ 1.5 (0.7) | ≤ 1.5 (0.7) |
| Bandwidth | @ 850 nm | MHz-km | ≥ 3500 | ≥ 1500 | ≥ 500 | ≥ 200 |
| | @ 1300 nm | MHz-km | ≥ 500 | ≥ 500 | ≥ 500 | ≥ 500 |
| Numerical aperture | | | 0.2 ± 0.015 | 0.2 ± 0.015 | 0.2 ± 0.015 | 0.275 ± 0.015 |
| Core diameter | | µm | 50 ± 2.0 | 50 ± 2.0 | 50 ± 2.0 | 62.5 ± 2.5 |
| Cladding diameter | | µm | 125 ± 1.0 | 125 ± 1.0 | 125 ± 1.0 | 125 ± 2 |
| Primary coating diameter | | µm | 242 ± 5 | 242 ± 5 | 242 ± 5 | 245 ± 10 |
| Single-mode fibre | | 9/125 µm | | | | |
| | | (ITU-T G.652.D) | | | | |
| Attenuation | @ 1310 nm | dB/km | ≤ 0.4 (0.35) | | | |
| | @ 1550 nm | dB/km | ≤ 0.4 (0.21) | | | |
| Chromatic dispersion | @ 1310 nm | ps/(nm-km) | ≤ 3.0 | | | |
| | @ 1550 nm | ps/(nm-km) | ≤ 18 | | | |
| Zero dispersion wavelength | | Nm | 1300 – 1322 | | | |
| Cut-off wavelength | | Nm | ≤ 1260 | | | |
| PMD | | ps/km | ≤ 0.1 | | | |
| Mode field diameter | | µm | 9.0 ± 0.4 | | | |
| Cladding diameter | | µm | 125 ± 1 | | | |
| Primary coating diameter | | µm | 242 ± 7 | | | |

5. Thermal Properties

| | |
|--------------------------|----------------|
| Operating temperature | -30°C to +70°C |
| Installation temperature | -5°C to +50°C |
| Storage temperature | -30°C to +70°C |

6. Mechanical Properties

| | | |
|---------------------------|-------------------------|--------|
| Max. number of fibres | 96 | |
| Cable outer diameter (mm) | Refer to range overview | |
| Cable weight (kg/km) | Refer to range overview | |
| Min. bending radius (mm) | static | 15 x D |
| | dynamic | 20 x D |
| Max. tensile strength (N) | EDS | 2000 |
| | MAT | 800 |
| Impact (J) | 5 | |

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7. Chemical Properties

| | |
|-----------|--|
| PE sheath | Non-aging, halogen-free, good stability to acids and alkalis |
|-----------|--|

8. EC Directives

Not applicable for fibre optic cables

9. Approvals

- RoHS
- Environmental and mechanical tests comply to EN 187000 and IEC 60794
- Halogen free according to IEC 60754-1

10. Product Range Overview

| Article number | Article designation | Fibre type | No. of Fibres | Weight (kg/km) | Outer ϕ (mm) |
|--------------------|---------------------------------|--------------|---------------|----------------|-------------------|
| Multimode | | | | | |
| 26640448 | HITRONIC® HQA800 48G 50/125 OM4 | 50/125 OM4 | 48 | 92 | 10.9 |
| 26640496 | HITRONIC® HQA800 96G 50/125 OM4 | 50/125 OM4 | 96 | 121 | 12.4 |
| 26640348 | HITRONIC® HQA800 48G 50/125 OM3 | 50/125 OM3 | 48 | 92 | 10.9 |
| 26640396 | HITRONIC® HQA800 96G 50/125 OM3 | 50/125 OM3 | 96 | 121 | 12.4 |
| 26640204 | HITRONIC® HQA800 4G 50/125 OM2 | 50/125 OM2 | 4 | 68 | 9.7 |
| 26640212 | HITRONIC® HQA800 12G 50/125 OM2 | 50/125 OM2 | 12 | 73 | 9.7 |
| 26640248 | HITRONIC® HQA800 48G 50/125 OM2 | 50/125 OM2 | 48 | 92 | 10.9 |
| 26640296 | HITRONIC® HQA800 96G 50/125 OM2 | 50/125 OM2 | 96 | 121 | 12.4 |
| 26640148 | HITRONIC® HQA800 48G 62.5/125 | 62.5/125 OM1 | 48 | 92 | 10.9 |
| 26640196 | HITRONIC® HQA800 96G 62.5/125 | 62.5/125 OM1 | 96 | 121 | 12.4 |
| Single-mode | | | | | |
| 26640912 | HITRONIC® HQA800 12 E 9/125 OS2 | 9/125 OS2 | 12 | 73 | 9.7 |
| 26640924 | HITRONIC® HQA800 24 E 9/125 OS2 | 9/125 OS2 | 24 | 73 | 9.7 |
| 26640948 | HITRONIC® HQA800 48 E 9/125 OS2 | 9/125 OS2 | 48 | 92 | 10.9 |
| 26640996 | HITRONIC® HQA800 96 E 9/125 OS2 | 9/125 OS2 | 96 | 121 | 12.4 |